Chod Harris VP2ML Editor

The DX Bulletin

America's Premier Weekly Amateur Radio Publication

# SPECIAL REPORT

## The N6RJ 2nd OP
### a computer program for IBM PCs

Jim Rafferty N6RJ has squeezed the venerable 2nd OP DX aid into a program for the IBM PC micro-computer and compatibles. The program puts a host of DX information about a DXCC country on your monitor screen with only a few keystrokes.

### What 2nd OP Does

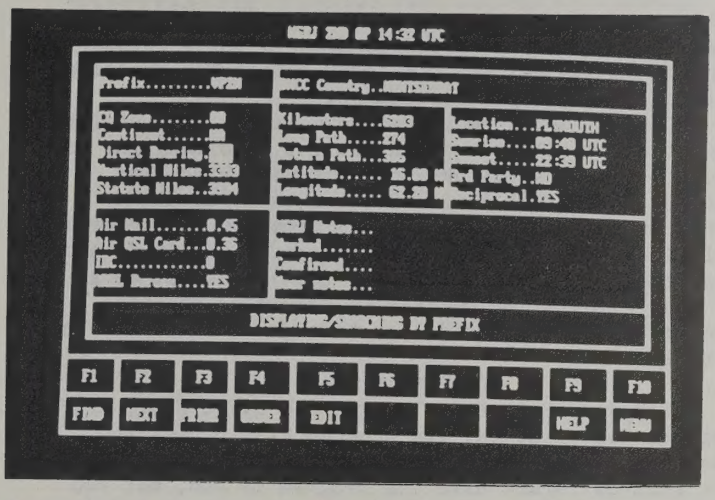
Starting from the main menu of the program, a DXer can find detailed information about a country in any of several ways. One can search through the 319-country list by prefix, country name, continent, or CQ magazine zone, through the function keys. Once in a search mode, the program will scan backwards and forward, or leap directly to a given entry. The F9 key will produce a limited Help menu at most spots in the program.

Once the program finds the appropriate country, it displays a screen with a wide range of DX data: CQ Zone, continent, bearings (including direct, long path, and reverse bearing), range in miles and kilometers, latitude and longitude of the DX location, and sunrise and sunset for today's date. Also included are postage data: costs of mailing airmail letters and QSLs direct to the country, and the number of IRCs required for an airmail response. Finally, the country data includes third party and reciprocal operating agreements.

Each country screen has a small space for entering operator notes: Worked, Confirmed, and Notes, each 35 characters in length. Notes from N6RJ are in the same region of the screen. These notes explain various prefixes, new and old, countries that spread over more than one zone or continent, and similar information. [Can you name the DXCC countries that lie in more than one continent? I know of three. -ed.]

The search modes other than by prefix can be very useful. Searching by zone will pull up all countries that have even a part of their territory in a given zone, a handy quick reference for zone hunters. The search by country name requires only the first few letters to find most countries. (There may be some use of the sort by continent, but I can't think of any.)

The DXer can also search by ITU prefix allocation. The 2nd OP will locate the appropriate DXCC country, beep, and will display a note that the prefix in question is assigned to the country displayed. In other words, typing "ZZ" in as a prefix will bring Brazil's data onto the screen. Very useful for WPX fans.

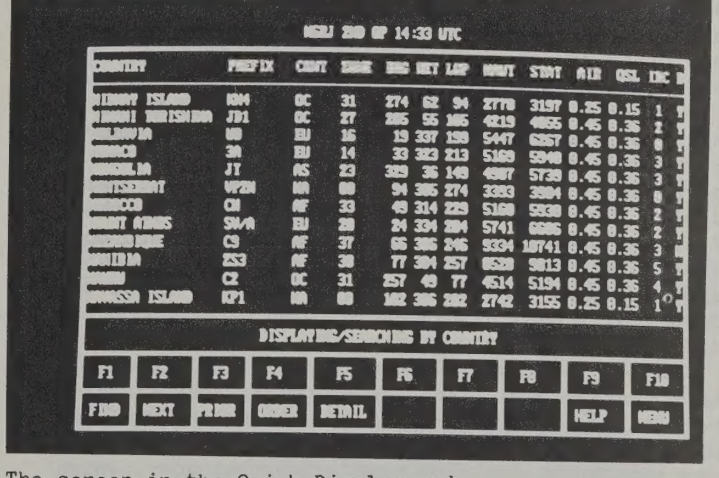



A typical country data screen from the 2nd OP

### Quick Display

Sometimes the DXer wants to see information from more that one country at a time on the screen. The Quick Display mode of the 2nd OP permits this. After selecting this mode from the main menu, the DXer can search by prefix, country name, zone, or continent, as above. In the Quick Display mode, data for 12 DXCC countries is displayed on the screen. The listings are condensed from the detailed country data screens, and include prefix, continent, zone, country name, bearings (direct, long path, and return), range in nautical and statute miles, postage data, and whether a QSL bureau exists in that country. The DXer can quickly flip to the detailed country data screen by entering the appropriate prefix or country name.

One problem with the Quick Display mode is that the country (or prefix) you select appears at the top of the list, not in the middle, which would allow the operator to see countries before as well as after the country selected.




The screen in the Quick Display mode

### Print Functions

The 2nd OP will print out the entire 319-country list in any of the four search modes: prefix, country name, zone, or continent. The printed listing includes the same data as on the Quick Display screen, plus a truncated selection of the user's notes: worked and confirmed. The prefix list is in "computer" order, with the prefixes starting with numbers coming before those beginning with letters. Thus it is not in the same order as the official DXCC Countries List, which begins with A2 Botswana, instead of 1A SMOM.

### Loading And Starting

The 2nd OP requires an IBM PC-XT-AT, or true compatible, with 2 double-sided, double-density disc

drives, or one such drive and a hard disc. The computer needs 640K installed memory, and a printer capable of 132 columns (or Epson-compatible 80-column printer) for the print function.

The 2nd OP is copy-protected with a disc utility that permits only two installations. You only get one chance to make a mistake, even if your hard disc crashes. The installation process is straightforward, but takes quite a long time, as the program calculates bearings and ranges from the latitude and longitude data of your station that you input as part of the installation process. A complete, readable User's Manual will guide you through each step of the process.

Evaluation

The 2nd OP is easy to use, and quite fast, after initial installation. The program will prompt the operator to recalculate the sunrise and sunset times for each different date the program is run, but you can skip that function if you are in a hurry and don't need the solar data. From the DOS prompt to display of an individual country takes about 20 seconds with an 8 MHz XT.

Jim Rafferty N6RJ has put a lot of thought into the 2nd OP, and has paid good attention to detail. Some of the trickier DXCC anomalies are covered, such as countries that lie in two continents. The prefixes, country data, and postal information are very up-to-date, but this information will change will time, and require up-dating of program files.

The 2nd OP data is obviously patterned after the official DXCC Countries List, and includes some of the errors in that list. For example, Peter 1 Island is listed as belonging to the Antarctic continent, but that continent is not recognized as such by the IARU in the Worked All Continent award. It should be in South America. And the recently-changed prefix for Swaziland (3DA0) is not included.

The sunrise and sunset data are great for checking out propagation paths in real time, but generating data for dates other than today is clumsy and time-consuming. One must reset the system clock to another date, recalculate all sunrise and sunset data for all countries, and then reset the system clock. Many other programs (such as Miniprop, DX Edge, etc.) provide this data much more easily.

My only real "complaint" about the 2nd OP is that it is not a memory-resident program, that you can pop up whenever you need that data, such as while operating a logging or contest duping program. Having to stop the program presently running, fire up the 2nd OP, print data from the screen, and then return to the interrupted program takes too long for this operator. Maybe the next version will be "resident." Also, do DXers really need distances in three different units? Isn't statute miles good enough?

Also, the 2nd OP is very expensive compared to other amateur radio computer programs, many of which are distributed as "shareware," such as the Miniprop MUF program. The $60 price and heavy copy protection puts the 2nd OP into the high-priced category, which may limit distribution.

The 2nd OP pulls together a variety of DX data into a single location, and makes finding that information a snap, as did the cardboard version of the 2nd OP. It will be a permanent part of the radio reference information in The DX Bulletin's computer. The 2nd OP is distributed by the Radio Amateur Callbook Inc., publishers of the Callbook. List price is $59.95, plus $3 shipping and handling. (Be sure to specify 5 1/4" or 3 1/2" drive.) Look for the 2nd OP at radio stores that carry the Callbook, such as Ham Radio Outlet.

## DXpedition to Sao Tome - S9
by Erik Sjolund SM0AGD

I am back from Sao Tome where I was QRV 5-17 May signing S9AGD. This was not a pure DXpedition because I had duties to do on the island and could only operate at nights and during weekends. LA7XB/Thor was supposed to be QRV at other times but he got some stomach problems and had to stay in bed for several days. Thor could only work a few QSOs as S9XB.

We were allowed to operate 10-80 meters. We tried hard but could not get permission for 160M. The authorities felt there was a risk for interference at the local coastal radio-station.

I had some 5200 QSOs with 80% on CW. Because S92LB/Luis is QRV almost every day on SSB I felt like S9 was mostly needed on CW. We became very good friends with Luis. He helped us to obtain our licenses, we were invited to his home and he often came to our hotel to inform himself about Thor's health. Luis was quite concerned when Thor didn't seem to recover fast enough.

One day I took a few hours off from work and pile-ups, then Luis took us on a ride to one of Sao Tome's wonderful beaches and we could see how pretty the island is. If I go to Sao Tome again I'll probably leave the radio back home... Do you believe I could? I'm afraid I would be lost. Hi.

After the expedition we were pleased we could leave the FB-33 yagi with Luis. It was donated by NCDXF and Fritzel and will be a big improvement over the dipoles Luis is using now. Hopefully we will also be able to arrange a rotator and send it to Luis within a short time. He is the only amateur in the country and he has to import all the equipment from abroad.

Most of my SSB QSOs I worked on 28 MHz on Saturday, 7th May. Between 1530Z and 1730Z I worked 350 QSOs in a European pile-up, and I enjoyed it, (which is not always the case.) This was the first opportunity I had since 1982 (at KH1/T31) to practice split-channel operation.

This method has been discussed (pros and cons) but I'm convinced a DX station using this system will have a higher QSO-rate than he would in any other way of operation. For stations in the pile-up, listening will pay off, not just power and signal strength. Also weak stations have better chances to break through a pile-up if they spend some time listening. Another advantage with channelized operation is that there will be plenty of room left for other activities on today's crowded SSB bands. There is no need to ask the pile-up to spread over 50 KHz or more.

I have modified my IC-735 so I can scan the memories while receiving but always return to a separate frequency when I transmit. This way I was transmitting on 28595 KHz and listening on 28620, 640, 660, and 680 kHz (plus-minus 1 KHz with help of the RIT control.) My impression is that people who spent a few moments listening could easily spot one of the channels which for the moment was not in use and call me there, knowing that within a few QSOs I would be listening zero-beat on his frequency. This you will never know in a normal split operation.

I would appreciate comments from people who heard my operation on 7th May. Please write to The DX Bulletin.

It will take a few weeks before the QSLs are printed and ready to go in the mail. Please be patient. I have moved form my call-book address but mail is being forwarded to my new QTH which is: Ormbergsv. 17, S- 193 00 Sigtuna, Sweden. Best 73,

Erik Sjolund SM0AGD

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### Advanced Radio Devices

Advanced Radio Devices of Sterling, Virginia says that their computer-controlled, very-heavy-duty rotator will be distributed by Electronic Equipment Bank, of Vienna VA.

Meanwhile, ICOM America has dropped the ARD amplifier from their line of products. ARD introduced the no-tune-up, automatic-frequency-change Model 230A amplifier earlier this year. Soon after winning FCC type acceptance for the amp, ARD set up distribution of the amp through ICOM America. The amp was displayed at the ICOM booth at Dayton as the 1500 HF Linear.

The agreement soon fell apart, however, and ICOM decided not to offer the amp for sale in the US. The decision was not based on any flaw in the amp, but instead was a political decision, "Based solely on international marketing conflicts."

In fact, ICOM America really liked the ARD 230A. Their staff writes, "Our extensive in-house use and testing has shown that the 230 Amplifier more than lives up to its specifications and unique features. It is easy to operate and very effective in contest situations...The auto-tune feature is amazing...band hopping is very fast!

"We are also impressed with the high quality of construction and obvious attention to detail.

"The 230 Amplifier is a quality product, worthy of ICOM's endorsement. It will prove to be a 'winner.'"

Although ICOM will not be marketing the amplifier themselves, they encourage ICOM dealers to market the amp.

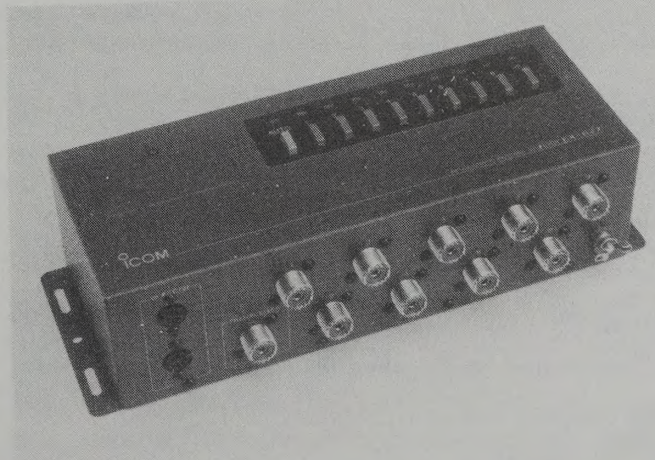
ARD will sell the 230 Amplifier through amateur radio equipment dealers. They do not plan any direct sales. Dealers interested in handling the 230 Amp should contact ARD at 103 Carpenter Dr., Sterling VA 22170, (703) 478-3100.

### ICOM Automatic Antenna Selector

With the combination of a no-tune, instant-band-change transceiver and an automatically-tuning linear amplifier, the DXer can QSY from band to band without touching any other controls. If the DXer has an all-band antenna. Otherwise, when the DXer quickly changes band, he might be transmitting into the wrong antenna.

ICOM has announced an accessory for their radios that eliminates this step: the ICOM EX-627 HF Automatic Antenna Selector. The EX-627 receives band information from ICOM HF transceivers' accessory jack, and automatically selects one of seven antenna jacks, based on a jumper pin matrix in the EX-627. You can also select each antenna manually, including two additional antenna jacks that are not part of the automatic selection process. 12V power comes through the same cable as band data, so no extra power supply is needed.

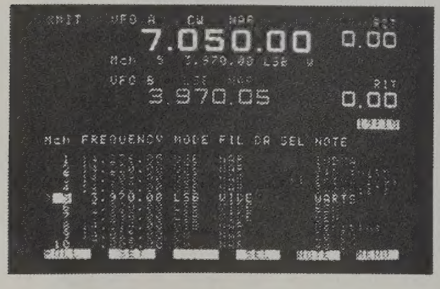
The EX-627 will handle a kilowatt of RF, up to 30 MHz. Suggested list price is $315, with an anticipated July, 1988, availability date.



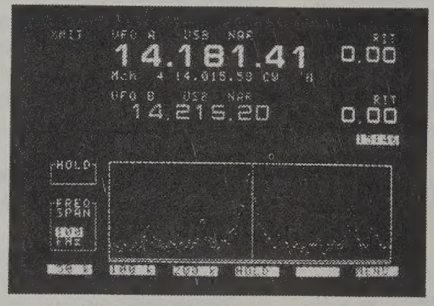

# THE FUTURE OF AMATEUR COMMUNICATIONS

Once in a lifetime, a transceiver is introduced that's so extraordinary and innovative that it opens a totally new era in HF communications. ICOM's pacesetting IC-781 proudly exhibits that hallmark achievement with futuristic designs and features of true legendary proportions. Whether DX'ing, contesting, pioneering new interests or enjoying unquestionable top-of-the-line performance, the IC-781 is indeed today's standard of excellence!

**Multi-Function Five Inch CRT.** Displays frequencies, modes, memory contents, operating notes, RIT, two menu screens, plus a panoramic view of all signals in a selected range. A portion of the screen also serves as a display for data modes like RTTY, AMTOR, and PACKET.




**Unique Spectrum Scope.** Continuously indicates all signal activities and DX pileups with your operating frequency in the center. Selectable horizontal frequency spans of 50, 100, and 200KHz for each side of the frequency you're listening to. Vertical range indicates relative signal strengths. A contester's dream!




**Dual Width Noise Blanker** includes MCF filter plus **level and width controls** to eliminate pulse and woodpecker noise with minimum adjacent-signal interference.

**Incomparable Filter Flexibility.** Independent selection of wide and narrow SSB filters plus CW filters. Second and third CW IF filters are independently selectable!

**Dual Watch.** Simultaneously **receives two frequencies in the same band!** Balance control adjusts VFO A/B receive strength levels. You can check additional band activity, even tune in your next contact, while in QSO without missing a single word!

**DX Rated!** 150 watts of exceptionally clean RF output. Easily drives big amplifiers to maximum power.

**Twin Passband Tuning** with **separate controls for second and third IF stages!** Increases selectivity and narrows bandwidth, independently varies low and high frequency response, or functions as IF shift. **It's DX'ing Dynamite!**

**A Total Communications System!** Includes built-in 100% duty AC supply, high speed automatic antenna tuner, iambic keyer, semi-automatic or full QSK CW break-in to 60 wpm, Audio Peaking Filter (APF), RF speech processor, multiscanning, 105dB dynamic range, all-band/all-mode receiver with general coverage, and much more!

**ICOM Dependability.** The phenomenal IC-781 is built for action and backed with the most extensive warranty in the industry.

**See the IC-781** at your local ICOM dealer.

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